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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,769	04/09/2004	Erol Sancaktar	089498-0354(CIP)	1443

7590 04/10/2007

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EXAMINER	
KING, BRADLEY T	
ART UNIT	PAPER NUMBER
3683	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,769	SANCAKTAR ET AL.	
	Examiner	Art Unit	
	Bradley T. King	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5 and 7-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5 and 7-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/21/2007 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5, and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US# 6454251.

US 6454251 discloses all the limitations of the instant claims including; a spring wire comprising a core that includes a plurality of fiber tows 10 (figure 2c); and an outer layer of resin that is substantially devoid of said fiber tows, wherein the spring wire has a constant thickness and cross-sectional shape, and is generally uniform, smooth, and free of any surface irregularities. US 6454251 further discloses using copper pipe as

cladding which would provide an extremely smooth outer surface and constant cross-section.

Regarding claims 9-11, 6454251 discloses glass fibers and epoxy resins.

Regarding claims 12-20, note that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113. It is maintained that the structure implied by the process steps is substantially identical to that disclosed by the reference.

Claims 1-2, 4-5, and 8-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US# 2852424.

US 2852424 discloses all the limitations of the instant claims including; a spring wire comprising a core that includes a plurality of fiber tows 14 (note column 3, lines 70-75); and an outer layer of resin that is substantially devoid of said fiber tows(since the fiber tows are saturated with resin, an outer layer of some degree of thickness inherently exists between the tows and the outer tube 12), wherein the spring wire has a constant thickness and cross-sectional shape, and is generally uniform, smooth, and free from any surface irregularities. Note the cladding which would inherently provide an extremely smooth outer surface and constant cross-section.

Regarding claims 8-11,2852424 discloses glass, rayon and epoxy resins.

Regarding claims 12-20, note that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See

MPEP 2113. It is maintained that the structure implied by the process steps is substantially identical to that disclosed by the reference.

Claims 1-2, 4-5, and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US# 4473217.

US 4473217 discloses all the limitations of the instant claims including; a spring wire comprising a core that includes a plurality of fiber tows 3; and an outer layer of resin that is substantially devoid of said fiber tows, wherein the spring wire has a constant thickness and cross-sectional shape, and is generally uniform, smooth, and free from any surface irregularities. Note that the tape creates a "generally" uniform, smooth surface.

Regarding claim 9, see the abstract.

Regarding claims 10-11, US 4473217 discloses epoxy. Column 2, lines 56-58.

Regarding claims 12-20, note that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113. It is maintained that the structure implied by the process steps is substantially identical to that disclosed by the reference.

Claims 1-2, 4-5, and 10-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US# 4991827.

US 4991827 discloses all the limitations of the instant claims including; a spring wire comprising a core 10 that includes a plurality of fiber tows; and an outer layer of resin that is substantially devoid of said fiber tows, wherein the spring wire has a

constant thickness and cross-sectional shape, and is generally uniform, smooth, and free from any surface irregularities. See figure 4, and column 4, lines 15-34.

Regarding claims 10-11, US 4991827 discloses epoxy. Column 5, lines 3-4.

Regarding claims 12-20, note that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. See MPEP 2113. It is maintained that the structure implied by the process steps is substantially identical to that disclosed by the reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US # 6454251 in view of US# 6612556.

US 6454251 discloses all the limitations of the instant claims with exception to a rectangular cross-section. US 6454251 instead shows a circular cross-section. US# 6612556 discloses a similar composite spring and further teaches both circular and rectangular cross-sections (column 4, lines 50-55) with the rectangular cross-section increasing the stiffness of the spring. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a rectangular cross-section as taught by US 6612556 in the spring of US 6454251 to provide an increased stiffness for

the same area, thereby reducing size and providing an increased spring force for a given application.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US # 49918217 in view of US# 6612556.

US 49918217 discloses all the limitations of the instant claims with exception to a rectangular cross-section. US 49918217 instead shows a circular cross-section. US# 6612556 discloses a similar composite spring and further teaches both circular and rectangular cross-sections (column 4, lines 50-55) with the rectangular cross-section increasing the stiffness of the spring. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a rectangular cross-section as taught by US 6612556 in the spring of US 49918217 to provide an increased stiffness for the same area, thereby reducing size and providing an increased spring force for a given application.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US # 4473217 in view of US# 6612556.

US 4473217 discloses all the limitations of the instant claims with exception to a rectangular cross-section. US 4473217 instead shows a circular cross-section. US# 6612556 discloses a similar composite spring and further teaches both circular and rectangular cross-sections (column 4, lines 50-55) with the rectangular cross-section increasing the stiffness of the spring. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a rectangular cross-section as

taught by US 6612556 in the spring of US 4473217 to provide an increased stiffness for the same area, thereby reducing size and providing an increased spring force for a given application.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US # 2852424 in view of US# 6612556.

US 2852424 discloses all the limitations of the instant claims with exception to a rectangular cross-section. US 2852424 instead shows a circular cross-section. US# 6612556 discloses a similar composite spring and further teaches both circular and rectangular cross-sections (column 4, lines 50-55) with the rectangular cross-section increasing the stiffness of the spring. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a rectangular cross-section as taught by US 6612556 in the spring of US 2852424 to provide an increased stiffness for the same area, thereby reducing size and providing an increased spring force for a given application.

Response to Arguments

Applicant's arguments filed 8/14/2006 have been fully considered but they are not persuasive.

It is maintained that the references either explicitly show a core/outer layer that is "substantially constant thickness and cross-sectional shape" and "generally uniform, smooth and free of any surface irregularities" as broadly defined by the claims, or the feature is inherent to the cladding or coating process. For instance, US 6454251 shows

a resin outer layer (formed in pathways 12) that is substantially devoid of fiber tows. The combination of the core and outer layer forms a substantially constant thickness and cross-sectional shape due to the rigid cladding 1. Regarding Taylor, note figure 4 is the relied upon embodiment. This embodiment utilizes a sheath which would result in the "substantially constant" and "generally uniform, smooth" features required by the claims. See column 4, lines 15-34.

Applicant's arguments regarding an "extremely smooth outer surface" are narrower than the claim limitations. Furthermore, there does not appear to be any evidence that the instant invention provides a significantly different surface than the cladding or coating processes of the prior art. It is maintained that the rejections are proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571) 272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTK

2/3/07

BRADLEY KING
PATENT EXAMINER